

Appendix E: Draft Wetland Statement of Findings

This Wetland Statement of Findings is included in this document for public review to meet the obligations of Executive Order 11990 (*Protection of Wetlands*) and NPS Procedural Manual 77-1: *Wetland Protection*.

Purpose of this Statement of Findings

The purpose of this Wetland Statement of Findings is to review the South Fork Merced River Bridge Replacement Project in sufficient detail to:

- Avoid, to the extent possible, the short- and long- term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.
- Describe the effects on wetland values associated with the Preferred Alternative.
- Provide a thorough description and evaluation of mitigation measures developed to achieve compliance with Executive Order 11990 (*Protection of Wetlands*) and National Park Service Procedural Manual 77-1: *Wetland Protection*.
- Ensure no net loss of wetland functions or values.

Affected Wetlands

Wetlands Extent

Wetlands¹ and riverine habitats are present in the channels of the South Fork Merced River and Angel Creek within the project area. In addition, narrow bands of mixed palustrine forest occupy the river- right and river- left banks. A total of less than 0.5 acre of wetlands exist within the project area with most of the wetlands area classified as aquatic habitat (approximately 85%) and the remainder classified as mixed palustrine forest (approximately 5%), and sparse shrub- scrub wetlands (approximately 9%).

Wetland Characteristics

Specific wetland classes identified within the project area are limited to riverine (river and creek) and palustrine (cobble bar). Using the Cowardin (USFWS 1979) classification, specific wetland and riparian classes within the project area include:

- Riverine upper perennial – main channel of the South Fork Merced River
- Palustrine forest – riparian forest habitat along the South Fork Merced River subject to various flooding regimes
- Palustrine scrub- shrub – riparian scrub (e.g., willow) habitat on cobble bars within the South Fork Merced River subject to various flooding regimes
- Palustrine emergent – herbaceous (e.g., sedge, rush, grass, etc.) habitat within Angel Creek subject to various runoff and flooding regimes.

The size, connectivity, and integrity of wetlands in the project area, particularly palustrine scrub-shrub, palustrine forest, and riverine habitat, have been directly compromised by the bridge and Wawona Road, which constrict the floodplain of the South Fork Merced River in the immediate area of the bridge and alter hydrologic flows. The majority of wetland acreage in the project area

¹ Wetlands herein are described using the Cowardin classification system.

is classified as riverine upper perennial and includes the open and flowing water of the South Fork Merced River. Riverside vegetation overhanging the main channel is mostly absent and contributes only minimal nutrients, organic matter, or shade to the riverine system. Redirected flows around bridge piers and abutments, coupled with the narrow band of riparian vegetation, have resulted in some bank erosion downstream of the structure on the river- right bank. Immediately upstream of the South Fork Bridge, a temporary Bailey bridge has been installed to carry Wawona Road traffic, and this structure serves as the limit for construction activities.

The floodplain in the vicinity of the bridge is restricted between approximately 25- foot high embankments. The river- left side, upstream of the bridge, has been confined by a vertical stone wall attached to the abutment on that side. Below the bridge, on the river- left side, there is a narrow band of white alder and incense- cedar trees and the mouth of Angel Creek (approximately 50- feet below the structure). The river- right side, both up- and downstream of the bridge, supports a narrow band of ponderosa pine, incense- cedar, white alder, California coffee- berry, horsetail, and bedstraw, primarily. Cobble bars within the river support a sparse stand of sandbar willow, horsetail, and sedge adjacent to the low- flow channel. Angel Creek supports a dense stand of horsetail, sedge, rush, thistle, small willow shrubs, blackberry, and cut-leaved blackberry. This small creek lies outside the zone of construction activities.

The South Fork Merced River downstream of the bridge is relatively level with a narrow band of riparian and scrub- shrub wetland vegetation along the river course. Riparian species in this area are characterized by small stands of willow, white alder, black oak, and ponderosa pine.

Existing Structures in Wetlands

Two South Fork Bridge piers and the bridge abutments are located within the bed and banks of the South Fork Merced River. The piers are located mid- channel and the river- right and river- left abutments are located within the riverbanks and palustrine forest zone.

Environmental Consequences of the Proposed Action on Wetlands

Analysis

Removal and construction of a new South Fork Merced River Bridge would have local, short-term, adverse, demolition/construction- related effects, including cofferdam placement, to the riverine habitat in a 90- foot- wide work zone. Within this work zone, sparse scrub- shrub wetland has become established along the low- flow channel. Effects to wetland and aquatic habitats would result from heavy equipment used for demolition/construction activities, causing soil disturbance and compaction, generating dust, vegetation removal, root damage to adjacent vegetation, erosion, and potential introduction of and spread of non- native species. The application of mitigation measures described below (e.g., Best Management Practices) would reduce the potential adverse impacts to wetland and aquatic habitats to a negligible intensity. Refer to *South Fork Merced River Bridge Replacement Environmental Assessment*, Chapter II, Alternatives, for mitigation measures incorporated into the proposed action.

In the long term, removal of the existing South Fork Bridge piers would restore the free- flowing condition of the South Fork Merced River, returning this portion of the river to a more natural state, thereby enhancing the hydrologic and biologic integrity of associated wetlands. The area would support riffle and shallow pool aquatic habitat, because deep scour holes that have formed around the piers would fill with cobble and sediment. This would result in habitat for fish and wildlife found in free- flowing rivers, including the Wawona riffle beetle, a species of special concern that inhabits these waters. There would be a small net gain in the area of floodplain, with a corresponding increase in the area of wetland vegetation (scrub- shrub and palustrine forest).

Cumulative Impacts

Cumulative effects to wetland and aquatic resources discussed herein are based on analysis of past, present, and reasonably foreseeable future actions in the South Fork Merced River corridor, in combination with potential effects of this alternative. The projects identified below include those projects that have the potential to affect local wetland patterns (i.e., within the river corridor) as well as regional wetland patterns related to the South Fork Merced River.

Wetland and riparian systems of the South Fork Merced River corridor have been altered somewhat by development and visitor activities. The largest of these alterations in the project vicinity was associated with development of the Wawona Golf Course early in the 20th century. In order to provide habitat for turf grasses and a playable surface, the wetlands associated with this site were drained and likely filled. These changes have had negative effects to the size, form, and function of wetland, aquatic, and riparian habitats and related species. While some of the past, present, and future projects in the South Fork Merced River corridor could have short-term, construction- related impacts on wetland resources, overall the cumulative projects would increase the size, connectivity, and integrity of wetland resources within the corridor, resulting in a long- term, minor, beneficial, cumulative effect on wetland patterns of the South Fork Merced River due to resource preservation and management focus.

Reasonably foreseeable future actions within the South Fork Merced River corridor are considered to have an overall beneficial effect on wetlands. For example, the Merced River Plan protects river- related natural resources through the application of management elements, including the River Protection Overlay, management zoning, protection and enhancement of Outstandingly Remarkable Values, and implementation of a Visitor Experience and Resource Protection framework. The *South Fork and Merced Wild and Scenic River Comprehensive Implementation Plan* provides river- related resource protection and management along the common National Park Service/U.S. Forest Service boundary of the South Fork Merced River that occurs approximately three miles upstream of the South Fork Bridge. Obtaining land currently being used as the Seventh Day Adventist Camp near Wawona, along with redesign and construction of the existing and new Wawona Campground facilities downstream of the bridge, would further provide for resource preservation, protection, and management activities in the South Fork Merced River drainage in the project vicinity.

Conclusions

Removal and replacement of the South Fork Bridge, particularly the piers and abutments, and removal of the temporary Bailey bridge would restore the free- flowing condition of the South Fork Merced River and return this portion of the river to a more natural state, thereby enhancing its biological integrity. The proposed action would result in a site- specific, long- term, negligible to minor, beneficial effect on vegetation, including aquatic, wetland, riparian, and upland types that provide habitat for a diversity of river- related species. The extent and quality of vegetation, including aquatic, wetland, riparian, and upland types, and other riverine habitats throughout the remainder of the South Fork Merced River corridor would be unaffected. Past, present, and reasonably foreseeable future projects, in combination with the proposed action, would have a net long- term, minor, beneficial effect on wetland patterns within the South Fork Merced River corridor.

Alternatives Considered

Alternatives considered in the *South Fork Merced River Bridge Replacement Environmental Assessment* (Chapter II, Alternatives) include the No Action Alternative and South Fork Merced River Bridge Replacement.

Alternative 1: No Action

Alternative 1, the No Action Alternative, would allow the South Fork Bridge to remain in its present condition, without replacement, maintenance, or repair. The temporary Bailey bridge would continue to serve as vehicle access into the park. No management action would be taken to repair, remove, or replace the bridge. The condition of benign neglect would eventually result in the collapse of a portion of the bridge, causing release of bridge debris into and possible bank erosion of the South Fork Merced River. Further natural resource damage would result from raw sewage entering the river (i.e., from broken sewerline that is attached to the existing bridge) and impacts resulting from removing debris from the downriver reach following a collapse.

Alternative 2: South Fork Merced River Bridge Replacement (Preferred Alternative)

Alternative 2 includes removal of the existing triple-span South Fork Bridge and replacement with a new single-span bridge in the same location. The new bridge would be approximately 150-foot long and 42-foot wide and would be approximately 13-foot wider to accommodate wider travel lanes, shoulders, and a new 5-foot-wide sidewalk. The new bridge would span the entire South Fork Merced River without the need for center support piers, thus restoring a more natural flow through this river reach. Utility lines attached to the existing bridge would be transferred to the temporary Bailey bridge during demolition and removal of the existing bridge and construction of the new bridge. When traffic and utility lines are rerouted onto the new bridge structure, the temporary Bailey bridge would be removed, along with the approaches and temporary abutments, and the site restored. The contractor staging area would be in the Wawona District Material Storage Area, approximately 0.4-mile east of the bridge. Construction of this project is expected to last approximately one year, starting about September 2003, with completion anticipated by October 2004.

Design or Modifications to Minimize Harm to Wetlands

Best Management Practices and Resource-Specific Mitigation Measures

Best management practices and resource-specific mitigation measures would be implemented, as appropriate, prior to, during, and/or after construction and removal of the temporary Bailey bridge.

Best Management Practices During Bridge Removal

The National Park Service (and its contractors) shall implement the following Best Management Practices, as appropriate, prior to, during, and/or after bridge removal. Specific tasks would include, but are not limited to, the following:

- Inspect the project to ensure that impacts stay within the parameters of the project and do not escalate beyond the scope of the environmental assessment, and to ensure that the project conforms to the U.S. Army Corps of Engineers Section 404 permit, Central Valley Regional Water Quality Control Board Waiver of Waste Discharge Requirements and 401 Water Quality Certification, and other applicable permits or project conditions.

- The National Park Service project manager shall ensure that the project remains confined within the parameters established in the *South Fork Merced River Bridge Replacement Environmental Assessment*, U.S. Army Corps of Engineers Section 404 permit, etc. The National Park Service project manager shall ensure that mitigation measures are properly implemented.
- Small, wheeled or tracked equipment shall be allowed to enter the river to assist in the placement of a containment system and a structural support system or to remove demolition debris from the river. To protect the riverbank, this equipment shall be lifted from the riverbank by crane and placed on the riverbed, or shall be driven on a ramp into the riverbed. Heavy equipment used within the bed and banks of the South Fork Merced River should be placed on mats, or other measures would be taken to minimize disturbance.
- The load limit and equipment size shall be restricted to protect nearby utility lines and established native vegetation.
- All construction equipment shall be stored within the delineated work limits and/or at the Wawona District Materials Storage Area.
- Implement measures to reduce effects of demolition and construction on visitor safety and experience. Visitors, contractors, and park personnel shall be safeguarded from demolition and construction activities. A barrier plan indicating locations and types of barricades shall be used to protect public health and safety.
- An emergency notification program shall be in place. Standard measures for emergency notification include:
 - Notification of utilities and emergency response units prior to demolition and construction activities, which require translocating utilities to the temporary Bailey bridge
 - Identify locations of existing utilities prior to activity to prevent damage to utilities during translocation activities
 - Contact Underground Services Alert 72 hours prior to any ground disturbance
 - No demolition or construction activity shall be allowed until the process of locating and translocating existing utilities is complete
- All tools, equipment, barricades, signs, surplus materials, and rubbish shall be removed from the project work limits upon project completion. Any asphalt surfaces damaged due to work on the project shall be repaired to original condition. All demolition debris shall be removed from the project site, including all visible concrete and metal pieces.
- Disturbed areas shall be graded and raked smooth to eliminate tire tracks and tripping hazards.

Resource-Specific Measures

Site Restoration

The last phase of the project is site restoration. Following removal of the existing bridge, construction of the new bridge, and removal of the temporary Bailey bridge, the site will be graded and recontoured, as necessary, to revegetate with appropriate wetland, riparian, and upland plant species. Ground surface treatment will include grading to natural contours, topsoiling, seeding, and planting. Accepted erosion protection measures, including jute mesh and hydro mulch, may be used, if necessary, to prevent soil loss. The National Park Service will

prepare a prescription for revegetating any disturbed areas, including riverbanks, to be included in the construction specifications. This prescription will comply with the Yosemite *Vegetation Management Plan* (NPS 1997a). Revegetation of disturbed sites will be conducted by park staff immediately following construction to reduce the potential for non- native plant invasion. All plant materials will be from genetic stock indigenous to Wawona, including trees, shrubs, and forbs obtained from the construction site by salvage methods or by propagating container plants from seed or cuttings. Following restoration efforts, the reclaimed sites will be monitored to determine if reclamation efforts are successful or if additional remedial actions are necessary. Remedial actions could include installation of erosion control structures, reseeding, and/or replanting the area, and controlling non- native plant species.

Proposed Compensation

No offsite compensation is required. The proposed action is designed to restore natural fluvial processes and wetland characteristics in the South Fork Merced River. The proposed action would result in a net increase of wetland extent, function, and value in the vicinity of the bridge. Free flow and natural movement of woody debris would be restored.

Justification

Nonwetland Alternatives to the Proposed Action

The South Fork Bridge is located within the bed and banks of the South Fork Merced River, within riverine and palustrine forest habitats of the river. The purpose of the South Fork Merced River Bridge Replacement Project is to replace the condemned and closed bridge, replace it with a new single- span structure, and remove the temporary Bailey bridge. This action complies with the spirit of the Wild and Scenic Rivers Act and the intent of the Merced River Plan—to protect and enhance Outstandingly Remarkable Values and restore free- flowing conditions to the South Fork Merced River. There are no alternatives to the proposed action that could be located outside the floodplain or wetland and aquatic habitat of the South Fork Merced River.

New Development

No new development is proposed for the South Fork Merced River Bridge Replacement Project. No new facilities would be located within wetland or riverine habitats.

Existing Development

The proposed action includes complete removal and replacement of the bridge and removal of the temporary Bailey bridge. Restoration, including revegetation of disturbed ground surfaces, would occur upon project completion.

Redevelopment

A single- span bridge would be constructed across the South Fork Merced River in place of the existing structure.

Conclusion

The proposed action would replace the condemned and closed South Fork Bridge and the potentially hazardous conditions associated with flooding by removing piers and abutments from the bed and banks of the South Fork Merced River. Following the new bridge construction, the temporary Bailey bridge would be removed and the site restored.

The proposed action would have a beneficial impact on the extent, function, and value of wetlands by enhancing free- flowing conditions of and woody debris transport in the South Fork

Merced River at this location. The National Park Service has determined that there is no practicable alternative that could be located outside the floodplain or wetland habitat. Mitigation and compliance with regulations and policies to prevent impacts to water quality, wetland function and values, and loss of property or human life would be strictly adhered to during and after bridge replacement.

Individual permits and other federal and cooperating state and local agencies will be obtained or updated, as appropriate, prior to removal activities. No long- term adverse impacts to wetlands would occur from the proposed action. Therefore, the National Park Service finds the proposed action to be acceptable under Executive Order 11990 for the protection of wetlands.

Recommended:

Superintendent, Yosemite National Park

Date

Certification of Technical Adequacy and Servicewide Consistency:

Chief Water Resources Division

Date

Approved:

Regional Director Pacific West Region, National Park Service

Date